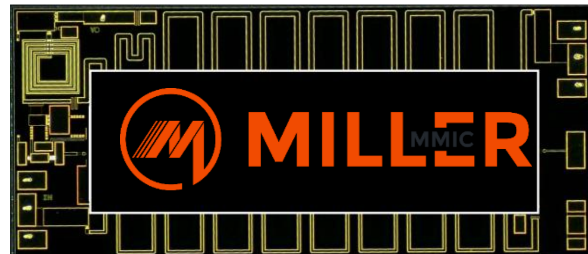
GaAs MMIC
Power Amplifier
14-18GHz

Features

- Frequency: 14-18GHz
- Small Signal Gain: 27.5dB
- P1dB: 30.5dBm
- Psat: 31.5dBm
- Power Supply: +5V/580mA
- Input/Output: 50Ω
- Die Size:3.14 x 1.59 x 0.1 mm



Typical Applications

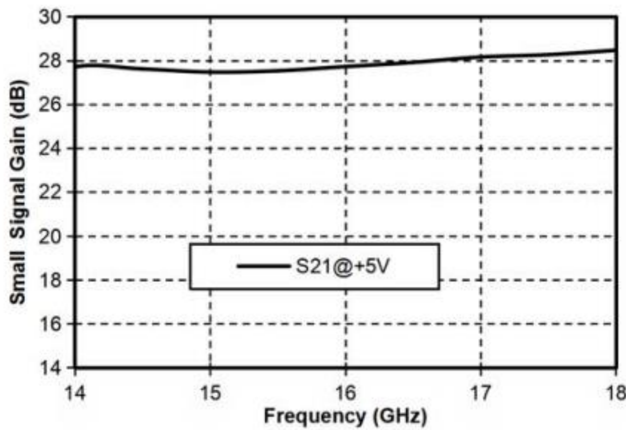
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Electrical Specifications

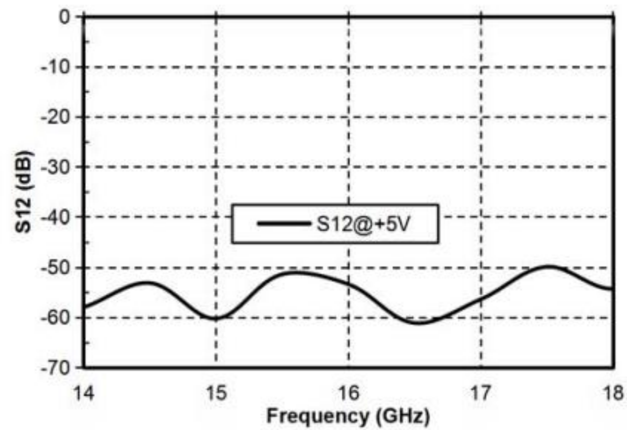
TA = +25ºC, Vd = +5V, Vg = -5V*, Ids=580mA

Parameters	Min.	Typ.	Max.	Units
Frequency		14-18		GHz
Small Signal Gain	-	27.5	-	dB
Gain Flatness		±0.5		dB
P1dB	-	30.5	-	dBm
Psat	-	31.5	-	dBm
Input Return Loss	-	15	-	dB
Output Return Loss	-	15	-	dB
*The gate voltage is -5V (integrated voltage divider circuit).				

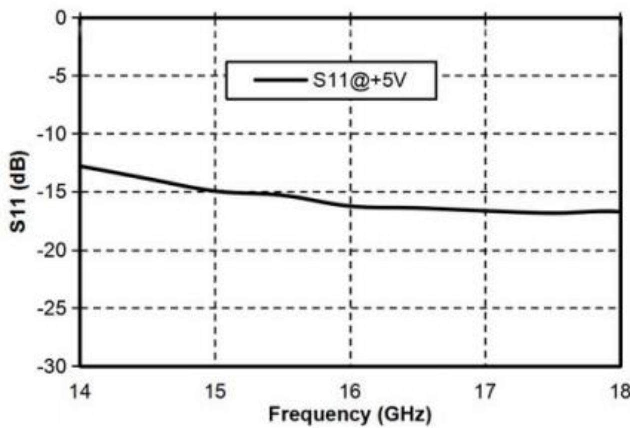
Gain vs. Frequency



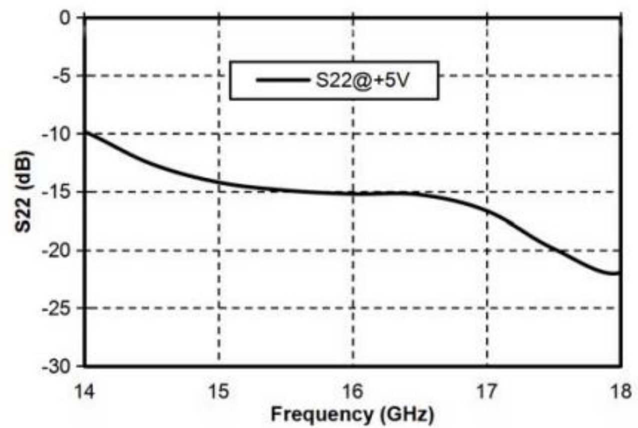
Reverse Isolation vs. Frequency



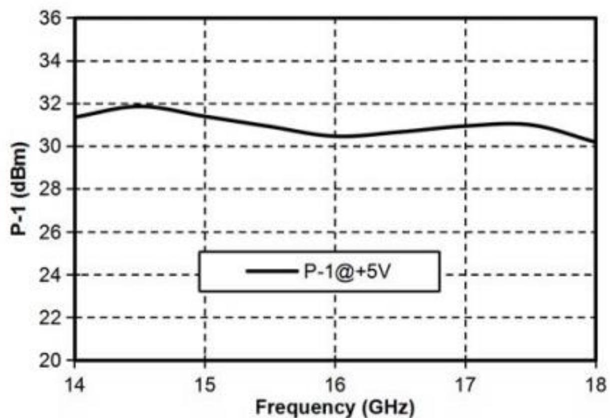
Input Return Loss vs. Frequency



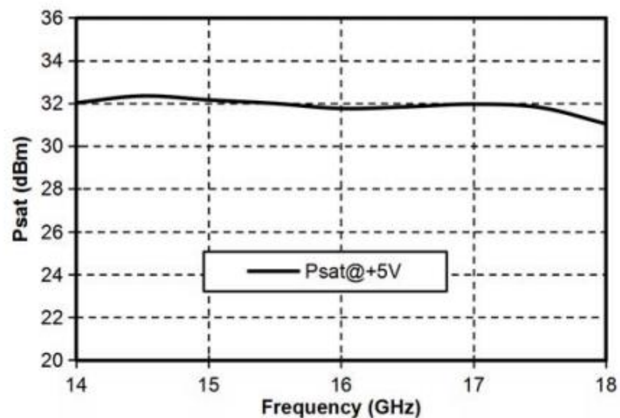
Output Return Loss vs. Frequency



P1dB vs. Frequency

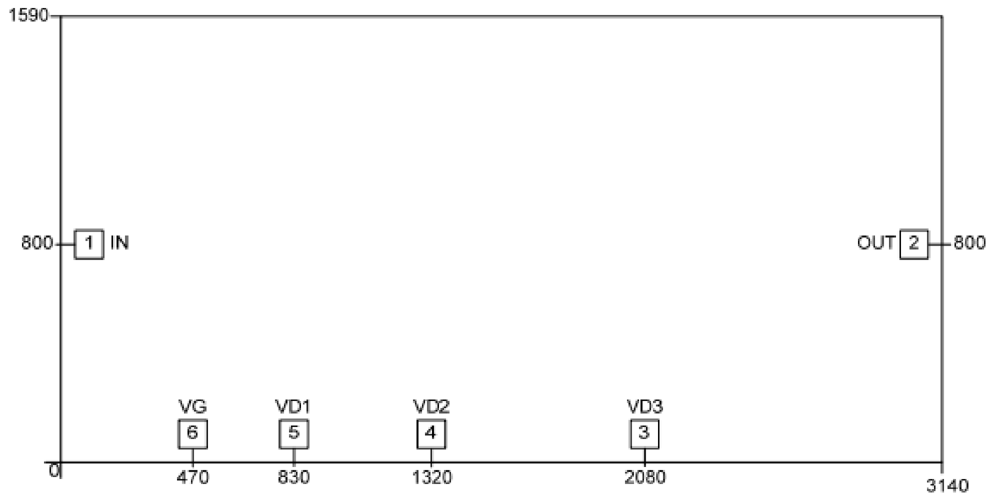


Psat vs. Frequency



Outline Drawing:

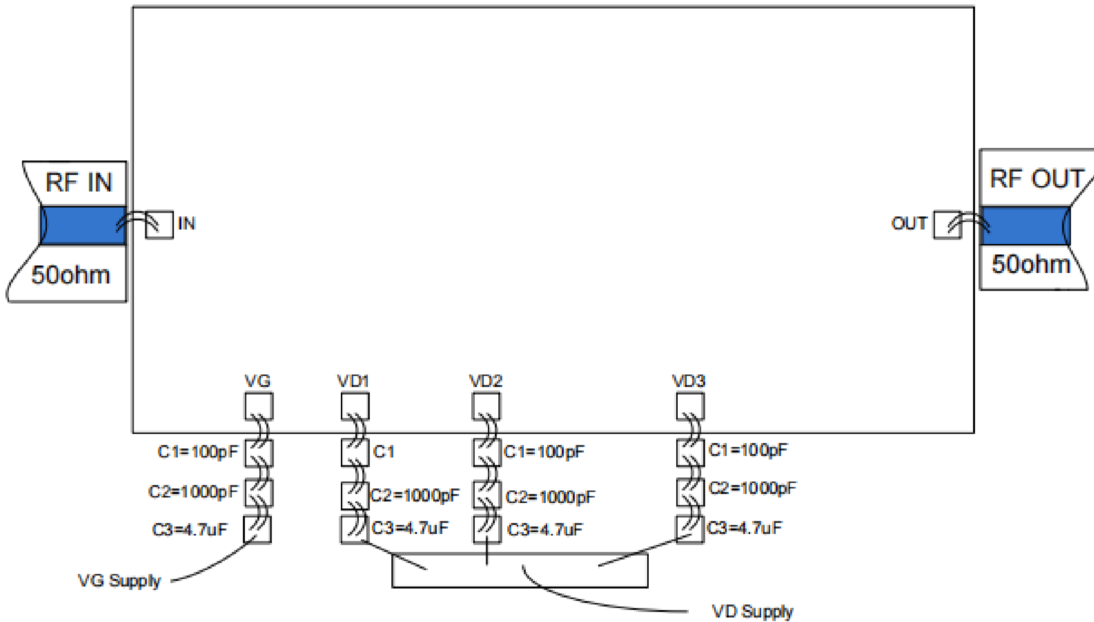
All Dimensions in µm



Pad Description

Pad	Function	Description
1	RF IN	Signal input terminal, connected to 50Ω circuit ; no blocking capacitor required.
2	RF OUT	Signal output terminal, connected to 50Ω circuit ; no blocking capacitor required.
3,4,5	Vd1~3	Amplifier drain bias; external 100pF, 1000pF, 4.7uF bypass capacitor required.
6	Vg	Amplifier gate bias; external 100pF, 1000pF, 4.7uF bypass capacitor required.
Die bottom	GND	Die bottom must be connected to RF/DC ground.

Assembly Drawing



Notes:
1. Die thickness: 100um
2. Typical bond pad is 100*100 μm^2
3. Bond pad metalization: Gold
4. Backside metalization: Gold
5. Backside of the die (GND)
6. No connection required for unlabeled bond pads

Maximum Ratings:
1. Maximum drain voltage: +9V
2. Maximum gate bias: -3V
3. Maximum input power: +25dBm
4. Operating temperature: -55℃ to +85℃
5. Storage temperature: -65℃ to +150℃